

PATENT SPECIFICATION

DRAWINGS ATTACHED

939,324

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COMPLETE SPECIFICATION

A Device for Controlling the Flow of Fluid in a Flexible Tube

WE, LES LABORATOIRES BERNARD & Co, a Company organized under the laws of France, of 17 rue de Valenciennes, Paris, France, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

A device for controlling the flow of fluid in a flexible tube has already been proposed which consists of a flexible substantially non-elastic closure which is adapted to be fastened over a length of the tube and which can be bent permanently so as to form in the tube an angle, the passage cross-section of which is zero or reduced and adjustable according to the value of this angle.

This flexible and substantially non-elastic closure is formed by a metal clip comprising a strip joined to clamps which embrace the flexible tube.

In comparison with this device, the present invention provides a device for controlling the flow of fluid in a flexible tube by deforming the tube or a portion thereof into zig-zag or other configurations involving a plurality of bends, comprising a metal clamp formed with at least two apertures which is bent back upon itself and shaped to provide at least three spaced loops adapted to embrace the tube and the outer portions adapted to engage each other for subsequent bending at points between said loops along lines substantially at right angles to the axis of said loops.

Two devices according to the invention are shown by way of example in the accompanying drawings wherein:

Figure 1 is a perspective view of a first form of device having three loops.

Figure 2 is a perspective view of a second form of device having five loops.

Figures 3 and 4 are perspective views showing the fitting of a device to a tube.

In the embodiments shown the device is formed by a strip of flexible metal which is folded on itself.

Loops 3 embracing with clamp 4 are provided in the hidden-over part of the strip.

Three or more loops may be provided depending upon the required degree of deformation of the tube, three loops being shown in Fig. 1 and five in Fig. 2.

The outer portions 1 and 2 of the metal strip can readily be moved apart by pressure applied by the fingers of the user, for example, in order to enable the device to be fitted on the tube 5 as shown in Fig. 3.

Once the tube 5 has been placed in the loops 3 which are adjusted in line with one another, the two outer portions 1 and 2 are brought close together so as to fix the device on the tube.

The device is then folded zig-zag fashion so that the arrangement shown in Fig. 4.

The flow in the tube 5 is controlled by closing the device to varying degrees.

The advantages of this device include:

Being closed, even in the case of liquid under pressure.

No contact with metal parts when the "Z" is completely closed, and hence no danger of asphyxiation should the "Z" closure is made completely.

The invention is essentially not limited to the above examples, in which modifications may be made without departing from the scope of the appended claims.

WHAT WE CLAIM IS:—

1. A device for controlling the flow of fluid in a flexible tube by deforming the tube or a portion thereof into zig-zag or other configurations involving a plurality of bends, comprising a metal clamp formed with at least two apertures which is bent back upon itself and shaped to provide at least three spaced loops adapted to embrace the tube and the outer portions adapted to engage each other for subsequent bending at points between said loops along lines substantially at right angles to the axis of said loops.

2. A device as set forth in claim 1, wherein the loops are arranged in line with one another and readily allow the passage of the tube.

3. A device as set forth in claim 1 or 2, wherein the outer portions of the metal clamp are readily movable from and into engagement simply by pressure with the fingers, thus enabling the device to be fixed on the tube.

4. A device for controlling the flow of fluid in a flexible tube substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

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1 SHEET This drawing is a reproduction of the Original on a reduced scale.

